Marshfield Associates

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And just like that…the metaverse collapsed, leaving us to ponder whether a digital tree falling in a cartoon forest makes a sound. The answer is, apparently, no—and most assuredly not once ChatGPT has entered the conversation. Generative AI and the astonishing capabilities of large-language models in developing content spanning text, sound, and imagery is making all the noise right now. It's been posited—and the stock market is putting its money where Chat's mouth is—that everything from video gaming to drug development to fashion design to (gasp!) investing will be revolutionized by the creative tools made available through this technology. Ignore the whispers about its inherent unreliability: its struggles with basic math, its inability to parse truth from falsity, and its hallucinatory riffs where gaps in its "knowledge" occur. While we, as adamant agnostics about any particular future, have no bot in this fight, we nonetheless have to scratch our heads about the credulousness of investors who forsake their own neural networks in favor of a fanciful one. Our portfolio stocks are paying the price, undergoing scrutiny as intense as that of any audit (no problems there, we welcome the flyspecking), while tech in general appears to be basking in the warm glow of a spa designed to coax out its inner child. Like a doting attendant, the Fed threw yet more cedar chips on the sauna this quarter by pausing its interest rate hikes, which in turn pumped up many tech company valuations, especially those whose cash flows are projected to strengthen only in the way-out years.

While some of tech's recent resurgence is likely a function of reversion to the mean following last year's pullback, the frenzy after Nvidia posted unexpectedly mighty sales results this quarter for the chips used in AI games and other applications would seem to tell a more complex (if convenient for us!) story. As one analyst summed up today's investing zeitgeist: "We think the market wants to believe Tesla is an AI name first, an auto company second."[1]

To wit: of the top ten stocks by market cap in the S&P 500, eight are tech companies, comprising an astonishing 28% of the total market. Apple, representing a whopping 8% of the S&P, has returned 50% year to date. Microsoft, constituting 7% of the market, has returned 43%. Tesla and Meta, making up a "paltry" 2% apiece of the index rang the bell resoundingly with returns of 113% and 138%, respectively. No need to do the math on the performance of the remaining 492 companies in the index as, by force of simple arithmetic, they have to have performed worse than the headline total index return.[2]

To be sure, this narrative is comforting to those of us on the periphery of the raucous virtual party, finding only peanuts in our swag bag. Equally certainly, we don't doubt that the new technology is fun to play with

[1] Wilmot, Stephen, "Why Tesla's Stock Rally Doesn't Make Sense—in Eight Charts", *The Wall Street Journal*, June 20, 2023.

[2] As another way of looking at it, the S&P 500 Equal Weight Index, which weighs each constituent company equally rather than by market cap/size, actually fell 0.35% since January through the start of June, according to data from Refinitiv. (See Steer, George, "Handful of tech stocks drive diverging measures of S&P 500 performance", *Financial Times*, June 3, 2023). Year to date, including January, the Equal Weight Index is up only 5.63% versus more than thrice that for the market-cap weighted index.

(just don't entrust it with your legal brief)[3] and a whiz at doing time-consuming low-level work more efficiently. And doubtless, it will be improved upon as AI makes the actual leap from mouthy parrot with access to the internet to true "intelligence" with the capacity to incorporate both deep learning (i.e., data) and symbolic manipulation (i.e., abstract reasoning). But there's no telling if and when that might happen, not to mention who will be the primary beneficiaries.

In the meantime, what's an investor to do? We certainly believe that some will, if only through luck, pick the winners in this lengthy game. We also suspect that most will not. We're very strongly of the opinion, however, that in the interim (and beyond!), people will need to eat, house and clothe themselves, find entertainment and community, and travel to and from the many jobs that AI cannot do. In other words, life will go on and those companies that can use AI to their advantage will do so—but so will their competitors. The inputs and outputs may change, but the basic physics of the economy will persist. And we here at Marshfield will continue to find and invest in companies that provide good value to their customers and generate healthy returns and growth in earnings as a result (not just tomorrow, but right now!), notwithstanding the noise and drama that swells and recedes around us over time. And, not to brag, but we're way better at physics and math than ChatGPT.[4]

Speaking of what investors should and shouldn't do, we did very little during the second quarter. We bought one new small position (Discover Financial Services) and sold nothing. We were initially drawn to Discover by its price (as of this writing, less than 8 times earnings) as well as our positive experience owning other card networks. As we continued learning about the company, we came to appreciate more fully the competitive advantages it enjoys as both a card issuer and card network, particularly its exemption from the regulatory restrictions that constrain its competitors. Although it generates the vast majority of its revenues from a business that is somewhat commodity-like in nature – i.e., lending – Discover distinguishes itself by focusing on a particular customer set that might otherwise have difficulty obtaining unsecured loans (the prime revolver segment) and by providing that population with distinctive customer service. These factors combine to help Discover generate excellent returns that consistently exceed those of other banks by a significant margin. We trust that will continue, especially as they seem to have excellent risk controls. But, as you know, as between faith and fact, we lean heavily toward the latter.

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[3] See Weiser, Benjamin, "A Man Sued Avianca Airline. His Lawyer Used ChatGPT: A lawyer representing a man who sued an airline relied on artificial intelligence to help prepare a court filing. It did not go well", *The New York Times,* May 27, 2023.

[4] In a hilarious twist on the old "which weighs more, a pound of feathers or a pound of bricks?" question, ChatGPT provides an answer that could put a sophist to shame: "2 pounds of bricks and 1 pound of bricks refer to the same unit of weight, which is a pound. Therefore, they weigh the same, which is one pound. The difference between them is only the quantity, not the weight." See, e.g., https://news.ycombinator.com, February 23, 2023.